MATH 150A-QUIZ 8, WINTER 2020

Name: _____

1. (5 pts) Let $f : I \to \mathbb{R}$ be strictly monotone decreasing and $f(I) \subset J$. Let $g : J \to \mathbb{R}$ be strictly monotone drcreasing as well. Show that the composition $g \circ f : I \to \mathbb{R}$ is strictly monotone increasing.

2. (5 pts) Let f be a continuous function defined on a closed, bounded interval $I = [a, b]$. Suppose that f assume its maximum M at some $\xi \in (a, b)$. Show that f cannot be one-to-one.